

CLAIMS

What is claimed is:

1. An inflatable mannequin comprising:

a) a torso with at least one articulating limb member attached to said torso; and

b) a swivel air-passing joint mechanism for attaching said at least one articulating limb member to said torso comprising a ball and socket joint arrangement with a tubular air passageway element traversing through said ball and socket joint arrangement that allows fluid flow communication between said at least one articulating limb member and said torso while permitting omni-directional articulation of said at least one articulating limb member relative to said torso.

2. The inflatable mannequin of claim 1 wherein said tubular air passageway element further includes at least two sheath members attached to opposing ends of said tubular air passageway element.

3. The inflatable mannequin of claim 2 wherein said at least two sheath members are attached to said ball and socket joint arrangement to securely attach said tubular air passageway element to said ball and socket joint arrangement.

4. The inflatable mannequin of claim 1 further including a single air inlet valve for inflating and deflating said inflatable mannequin.

5. The inflatable mannequin of claim 1 wherein said tubular air passageway element forms a passageway through said swivel air-passing joint mechanism for providing fluid flow communication between said torso and said at least one articulating limb member.

5 6. The inflatable mannequin of claim 1 wherein said ball and socket joint arrangement comprises:

a) a ball member,
b) a socket member shaped to rotatably receive said ball member,
c) a conduit which traverses through said ball member, and
d) a cup member which surrounds said ball member and attaches said ball member to said socket member.

7. The inflatable mannequin of claim 6 wherein said tubular air passageway element comprises:

a) a hollow, flexible tubular element with two opposing ends disposed within said conduit,

- b) a sheath member attached to one of said two opposing ends of said hollow, flexible tubular element that is further attached to said socket member, and
- 5 c) a sheath member attached to the other end of said two opposing ends of said hollow, flexible conduit that is further attached to said cup member.

8. The inflatable mannequin of claim 7 wherein said ball and socket arrangement further includes lip members attached to said socket member and to said cup member for securing said ball and socket arrangement to said inflatable mannequin.

9. A swivel air-passing joint mechanism for use with a hollow mannequin comprising:

- a) a socket member defining an aperture;
- 5 b) a ball member rotatably received within said socket member capable of omni-directional articulation within said socket member, said ball member defining a conduit with openings formed at the opposite ends of said conduit; and
- c) a tubular air passageway element disposed within said conduit and extending outwardly from said aperture that allows 10 fluid communication through said ball member and said socket member irrespective of the registry of said two openings relative to said aperture.

10. The swivel air-passing joint mechanism of claim 9 further including a lip member attached to said socket member for securing said socket member to a limb member of an inflatable mannequin.

11. The swivel air-passing joint mechanism of claim 9 further comprising a cup member which defines an aperture placed over and attached to said ball member which interconnects said ball member to said socket member.

12. The swivel air-passing joint mechanism of claim 11 wherein said cup member further includes a lip member to secure said cup member to a torso on an inflatable mannequin.

13. The swivel air-passing joint mechanism of claim 9 wherein said tubular air passageway element further includes two sheath members attached at opposing ends of said tubular air passageway element to securely attach said tubular air passageway element
5 to said swivel air-passing joint mechanism.

14. The swivel air-passing joint mechanism of claim 13 wherein one of said two sheath members is affixed to said cup member

while the other of said two said sheath members is affixed to said socket member.

15. A hollow mannequin comprising;

a) a hollow torso; and

b) at least one fully articulating hollow limb member capable of omni-directional articulation, said at least one fully articulating hollow limb member being attached to said hollow torso and in constant fluid flow communication with said hollow torso regardless of the particular omni-directional articulation relative to said hollow torso.

16. The hollow mannequin of claim 15 wherein said at least one fully articulating hollow limb member capable of omni-directional articulation is attached to said hollow torso with a swivel air-passing joint mechanism.

17. The hollow mannequin of claim 16 wherein said swivel air passing joint mechanism comprises a ball and socket joint arrangement with a hollow flexible tubular element traversing through said ball and socket joint arrangement.

18. The hollow mannequin of claim 17 wherein said ball and socket arrangement comprises:

a) a ball member with a conduit traversing through said ball member, and

b) a socket member rotatably receiving said ball member.

19. The hollow mannequin of claim 18 further comprising a tubular air passageway element which is placed within said conduit and attached to said ball and socket arrangement.

20. The hollow mannequin of claim 15 wherein there are four of said hollow articulating limb members.

21. The hollow mannequin of claim 20 wherein said four hollow articulating limb members are arm members and leg members.

22. The hollow mannequin of claim 15 wherein said hollow mannequin is inflatable.

23. The hollow mannequin of claim 15 further including a single inlet valve for allowing air or fluid to enter and exit said hollow mannequin.

24. A method of allowing constant fluid flow communication between two hollow bodies attached to one another comprising the steps of:

a) providing at least two hollow bodies with an opening located on each of said at least two hollow bodies;

b) providing a swivel air-passing joint mechanism to attach said at least two hollow bodies to one another

5 comprising;

i) a ball and socket joint arrangement with a front end and a back end,

ii) a tubular air passageway element traversing through said ball and socket joint arrangement allowing fluid flow communication through said ball and socket joint arrangement while permitting said ball and socket joint arrangement to have full omni-directional movement; and

c) connecting said at least two bodies together by attaching said front end of said ball and socket joint to one opening of one body and connecting the back end of said ball and socket joint to the opening of the other of said at least two hollow bodies.

25. The method of allowing fluid flow communication between two hollow bodies of claim 24 further comprising the step of placing fluid within one body by means of a single inlet valve and allowing said fluid to freely flow between said at least two hollow bodies.